BOTTLE COOLERS AND METHOD OF PROMOTING BOTTLED BEVERAGES

Background Of The Invention

Commercial bottled beverage products come in bottles made of PET, glass, etc. Over the past ten years, PET bottles, in particular, have become increasingly popular. For example, it is estimated that in the U.S. over 14 billions units of 20 ounce PET bottles of carbonated soft drinks were sold in 2001. Sales are even higher if bottled water, sport drinks, fruit drinks, iced teas, etc., are taken into account. Over 4 billion units of 2 liter bottles were sold.

These figures help show why beverage companies are willing to spend hundreds of millions of dollars on advertising to promote their products. One way that beverage companies promote products is through promotional drink-ware products, such as cups, mugs, sports bottles, etc., with brand names and logos printed on them. These methods, however, are mostly used in connection with sales of fountain drinks. Promotional drink-ware products for bottled beverage products, except possibly insulated foam sleeves, are currently not available.

The growing popularity of PET bottles suggests that the beverage industry and sellers of beverages would be interested in using bottle coolers to promote bottled beverage products, particularly given the high profit margins involved.

Summary of the Invention

In Applicant's U.S. Patent No. 6,588,621, an individual bottle cooler was disclosed in which a single bottle of beverage could be held therein, wherein standard ice cubes, such as crushed, chopped, diced, etc., could be stored and sealed within the space between the container and bottle, to keep the beverage in the bottle cold. The container was preferably sized and shaped so that a beverage bottle of a predetermined size and shape could be held inside, with one or more supports for the lower end of the bottle, wherein a cap with an opening therein could be used to seal the container, with the neck of the bottle extending through the cap. A sealing member on the cap could then be pressed and substantially sealed against the shoulder of the bottle, to prevent ice and water in the space from leaking out. This way, ice and water could be maintained in direct contact with the bottle, and the beverage could be maintained at a reduced temperature, without diluting or introducing contaminants into the beverage, and carbonation could be preserved. The beverage could also be poured, served and consumed without having to take the bottle out of the ice.

The present invention relates to similar types of bottle coolers that enable individual beverage bottles to be maintained at a reduced temperature, as well as a method of using those coolers to promote specific bottled beverage products. The method uses bottle coolers made to accommodate a particular beverage bottle having a predetermined size and shape, wherein by promoting them, beverage companies and sellers of beverages can promote the particular bottled beverage products the bottle coolers were designed to fit, since consumers that want to use the bottle coolers would have to buy those bottled beverage products, and not other bottled beverage products, to do so.

Brief Description of the Drawings

FIGURES 1, 2, 3 and 4 show an embodiment with double wall construction and a pivoting carry handle for a 2 liter bottle or other large PET bottle;

FIGURES 5a and 5b show another double wall embodiment;

FIGURES 6a, 6b and 6c show a stackable embodiment with a replacement straw;

FIGURES 7a and 7b show alternate caps for sealing the container;

FIGURES 8a and 8b show a one-piece embodiment;

FIGURES 9a and 9b show another embodiment with a bowl-like floor;

FIGURES 10a and 10b show supports for a typical PET bottle;

FIGURES 11a and 11b show a cap with a sealing member and gasket; and

FIGURES 12a, 12b, 12c and 12d show an embodiment using refrigerant rings.

Detailed Description of the Invention

In Figures 1-4, an embodiment 270 suitable for use with a 2 liter bottle 271, or other large size bottle, is shown. Bottle cooler 270 has a double wall container 272 and cap 276 capable of being sealed onto container 272. Container 272 is preferably an open-top container formed by inner shell 274 and outer shell 273, wherein an opening preferably enables a bottle, such as 271, to be inserted and positioned at least partially therein.

Inner shell 274 preferably has extended on the inside thereof at least one support, such as 275, or a plurality of supports, such as 292, extending up and/or inward from inner shell 274, adapted to provide vertical and lateral support for bottle 271. This way, bottle 271 can be inserted into container 272, and held in a substantially fixed position by supports 275 or 292, such that a space 294 is formed between bottle 271 and container 272, in which ice particles, such as ice cubes, crushed ice, chopped ice, etc., can be stored. Inner and outer shells 274, 273 can

be any shape that allows space 294 to be of sufficient size. Preferably, the distance between inner shell 274 and bottle 271 allows conventional size ice cubes to be distributed and stored therein. While it is desirable that sufficient space 294 be provided, it is also desirable for container 272 to be relatively compact, and easy to manufacture and store, and therefore, the present invention contemplates that these factors should be taken into account when designing container 272.

Cap 276 preferably has a central opening, as shown in Figure 4, through which neck of bottle 271 can extend. Cap 276 preferably has a resilient sealing member 284 extended on the inside and substantially around the opening. When cap 276 is tightened onto container 272, with neck extended through the cap's opening, sealing member 284 preferably engages and presses against the shoulder of bottle 271, to substantially seal space 294 with bottle 271 and ice in container 272.

Sealing member 284 preferably has an engaging surface, which can be in virtually any cross-sectional shape that performs in the intended manner. For example, it can be semi-circular or semi-oval, and/or have multiple blades or ribs, etc., which can help promote water-tightness, even against unevenly shaped bottles. Sealing member 284 can be secured to cap 276 using any conventional method, including an interference fit, interlocking sections, adhesives, chemical bonding, fusing, etc. Preferably, sealing member 284 is chemically bonded to cap 276 using a two shot or over-mold method, or mechanically snapped in.

Sealing member 284 is preferably made of resilient material, such as Santoprene®, Neoprene®, rubber, silicon, polypropylene, polyethylene, or other like material, or a combination thereof, etc. Sealing member 284 can be firm and/or thick enough so that a degree of tolerance can be provided to form a seal even if bottle 271 is not made to exact dimensions. Sealing member 284 is preferably made with a durometer between 25A and 80A or higher. Sealing member 284 preferably has a low friction coefficient to make removing cap 276 relatively easy, and the material used to make sealing member 284 preferably has relatively high flow characteristics to form the ribs and/or blades.

Cap 276 preferably has threads 296 along an internal diameter thereof for engaging threads 295 along an external diameter of container 272. The threads can be continuous or broken. An interference fit, valve seal, gasket or other connection, etc., is preferably created between cap 276 and upper landing of container 272, to enable the connection between cap 276 and container 272 to be watertight.

Various supports, such as 275 or 292, for supporting bottle 271 in relation to container 272 are contemplated. Supports 275 or 292 preferably keep bottle 271 at a relatively fixed position inside container 272 so that when cap 276 and container 272 are tightened together, bottle 271 can be held in substantial compression between sealing member 284 and supports 275 or 292, with sealing member 284 pressed tightly against bottle 271 to form a substantial watertight seal. Cap 276 and container 272 are preferably adapted to hold a particular bottle 271 having a predetermined size and shape, which requires the shape, size and location of supports, 275 or 292, and shape, size and location of sealing member 284, to be pre-determined to maintain bottle 271 in position inside container 272.

Inner shell 274 is preferably formed to fit inside outer shell 273, forming a cavity 282 between them for insulation. Outer shell 273 and inner shell 274 are preferably secured together along upper portion 278 of outer container 273, and intermediate portion 280 of inner container 274. An exterior flange 279 is preferably extended along intermediate portion 280, forming a narrow groove in which upper portion 278 of outer container 273 can be inserted from below and connected. The connection can be by any conventional means, such as adhesives, chemical bonding, mechanical connection, sonic welding, spin welding, etc. The cavity 282 between inner and outer shells 274, 273 can be filled with foam insulation, which can be used to secure inner shell 274 to outer shell 273 in a conventional manner. No additional supports are required between inner 274 and outer 273 shells, although supports, such as near the bottom, can be provided if desired.

When central support 275 is used, support 275 preferably provides support for the lower end of bottle 271, as well as prevents bottle 271 from rotating once cap 276 is placed on container 272. Support 275 can extend upward and preferably has five ridges, such as 222 shown in Figure 10a, wherein the five ridges are adapted to fit into the five grooves found on the lower surface of a conventional PET bottle. The bottom of a typical PET bottle 271 has multiple grooves, i.e., many have five grooves, to provide rigidity and support thereto. This way, when bottle 271 is inserted into container 272 and held in substantial compression between cap 276 and support 275, bottle 271 is prevented from rotating. It can be seen that support 275 can have an upper configuration that can be adapted to any particular type of PET bottle, regardless of its shape, by mirroring the shape of the bottom of the

bottle, i.e., such as by digital scanning. The curved floor 277 that surrounds support 275 helps to displace ice upward, if necessary, as bottle 271 is pushed into the ice.

When a plurality of supports 292 is used, which is the preferred method, supports 292 preferably extend inward as indentations from inner shell 274, and extend upward from floor 277. Preferably, supports 292 are designed fit into grooves on the bottom of bottle 271, wherein the supports provide vertical and lateral support for, as well as help self-center, bottle 271. Preferably, five supports, or at least three, are provided to create a support system that can maintain bottle 271 in a substantially fixed position inside container 272, wherein each support can be adapted to fit into a single groove on the bottom of bottle 271, while allowing a substantial portion of the ice particles to be in direct contact with bottle 271.

Cap 276 preferably has a pivoting carry handle 285 that pivots about two pivot points or notches 286 to enable cooler 270 to be easily carried and handled. Handle 285 preferably has an extended section 287 that clears the top 288 of bottle 271, as shown in Figure 1, which enables handle 285 to be comfortably gripped in an upright position. Handle 285 can also be used to tilt cooler 270 for serving purposes, such as in the position shown in Figure 2, as well as laid flat as shown in Figure 3. A stop 291 is preferably provided to ensure that handle 285 only pivots in one direction. Handle 285 is preferably made with web-like stiffeners 289 to maintain rigidity. Cap 276 preferably has a smaller diameter grip portion 290 to enable cap 276 to be easily gripped by the user's hands.

In use, bottle 271 is preferably inserted into container 272, and centered on supports 275 or 292, which helps maintain bottle 271 in a substantially fixed and centered position. Next, standard ice particles, such as chopped, cubed, crushed, diced, etc., are preferably placed inside space 294 between bottle 271 and inner shell 274. Alternatively, ice can be added first, in which case bottle 271 can be inserted into the ice, wherein ice can be displaced upward by curved floor 277 to allow room for bottle 271. The distance between inner shell 274 and bottle 271 preferably enables a sufficient amount of ice to be placed in space 294 to maintain bottle 271 at a reduced temperature for an extended period of time.

Next, cap 276 is preferably tightened over bottle 271 with the neck extending through the opening to cause sealing member 284 to be pressed and sealed against the shoulder of bottle 271. Cap 276 is preferably sealed onto container 272, such that space 294 is substantially sealed watertight. This prevents water, such as from

melting ice, from leaking out, and enables the beverage to be poured directly from bottle 271 without having to remove bottle 271 from the ice.

Additional embodiments of the bottle cooler will now be discussed. Figures 5a and 5b show another embodiment with a double wall. Container 130 is constructed using an outer shell 132 and inner shell 134. Inner shell 134 is preferably blow-molded and has a plurality of indentations 138, as shown in Figure 9b, that extend inward to provide a support system for bottle 144, similar to those shown in previous U.S. Patent No. 6,588,621. One or more indentations 138 can be adapted to fit into one or more grooves on bottle 144, as described above, to prevent bottle 144 from rotating inside container 130.

Outer shell 132 only extends part of the way up because the upper portion 135 of inner shell 134 is narrowed, and outer shell 132 is injection molded to fit over the widest area of inner shell 134. When upper portion 135 is not narrowed, both pieces can be injection molded and extended substantially the height of the container. Lower section 137 can be narrowed for fitting into cup-holders. A handle 136 is preferably provided on outer shell 132.

A connecting means 140 is preferably provided where upper portion 142 of outer shell 132 connects to inner shell 134. This can be done by any conventional method, as discussed above, including spin welding, sonic welding, adhesives, bonding, fusing, a snap-in fit, tongue and groove connection, threads, etc. A gap 139 is preferably provided between inner and outer shell 132, 134, which can be filled with foam insulation. Spacers 131 can be located between inner and outer shells 132, 134 to support outer shell 132 in relation to inner shell 134. Any other double wall construction is contemplated.

Figures 6a, 6b and 6c show an embodiment where containers 150 are made of moldable plastic and capable of being stacked on top of each other. Figure 6a shows wall 152 of container 150, including sloped surface154, lower wall 153, and indentations 156, being slightly angled with a draft so that a plurality of like containers 150 can be stacked on top of each other. Lower wall 153 is preferably narrowed to enable container 150 to fit into conventional cup-holders. Container 150 can be economically manufactured, so that it can be sold or given away as a souvenir or promotional item, and enables more pieces to be stacked and stored.

Indentations 156 preferably form supports, as described above, which help to keep bottle 158 in a relatively fixed position. Preferably, there are at least three

indentations 156, i.e., they can all be shaped like indentation 156 since injection molds are preferably used. At least one of the indentations 156 is preferably adapted to fit into one of the grooves on the bottom of bottle 158, as described above, to prevent bottle 158 from rotating. On the other hand, when bottles are used that have pull open tops, this embodiment can, like the others, be made without supports extending into one or more grooves on bottle 158. In such case, providing only lateral and vertical support to bottle 158, without preventing bottle 158 from rotating, would be sufficient.

In a variation of this embodiment, a central support can be extended up from floor 155 of container 150, wherein the floor would have an indentation angled or tapered upward so that similar containers 150 could be stacked on top of each other, with one support of one container 150 stacked on top of a support of an adjacent container 150. As discussed above, the upper surface of the support can be adapted to fit into grooves on the bottom of bottle 158, to prevent bottle rotation.

Cap 160 is preferably made of molded plastic, and adapted so that it simply snaps onto the top of container 150, as shown in Figure 6a, or can be threaded as discussed previously. As shown, a curled over rim 162 can be provided that snaps over and onto flange 164 on the upper edge of container 150. This way, container 150 and cap 160 can be easily snapped together.

Cap 160 preferably has a central opening 166 through which the neck of bottle 158 can extend. Although it can, opening 166 does not necessarily have to have a separate resilient sealing member, since the plastic material will have some degree of elasticity and resilience. Opening 166 can be formed like a cutout hole with a predetermined diameter that fits relatively snug over a smooth shoulder of bottle 158. The inner edge 170 of opening 166 can be shaped to tightly fit the bottle's shoulder, such that a relatively watertight fit can be provided. Alternatively, the edge 170 can be coated with a soft resilient material to provide an improved seal. Bottle 158 can also be adapted with a horizontal rib around the shoulder where edge 170 meets bottle 158 to provide a better fit.

This embodiment can be provided with a separate replacement twist-off lid 161 with a built-in straw 163, as shown in Figure 6c, such that after the bottle's lid 159 is opened, the user can simply replace the bottle's lid 159 with the replacement lid 161 and then use straw 163. The straw, in such case, preferably has a pull-off

cap 165 so that it can be sealed. An advantage of using a straw is that it draws beverage from the bottom of bottle 158, which is where the beverage is the coldest.

Figures 7a and 7b show embodiments of caps 175 and 180 that can be adapted to provide a water-tight seal without having a bottle in the container, so that the container can double as a sports bottle, mug, etc. In situations where bottled drinks are not desired or available, the container can be used as a sports bottle or mug for fountain drinks. The alternate cap designs can be offered separately, so that consumers will have the option of using the container as a bottle cooler, or as a traditional sports bottle or mug.

In Figure 7a, a cap 175 similar to cap 240 (shown in Figure 11a) is shown, although any cap discussed herein can be used. In this embodiment, a separate plug 176, such as made of resilient material, can be inserted into opening 177 of cap 175. Plug 176 is preferably provided with an insert portion 178 that can be inserted into opening 177, and a flange portion 179 that can be extended over cap 175, to substantially seal opening 177. Insert portion 178 is preferably adapted such that it can be snapped into opening 177 with an interference fit, such that plug 176 can be retained therein. Plug 176 can be used to seal opening 177 when no bottle is used. Insert portion 178 can also be adapted with threads that connect to threads on opening 177.

In Figure 7b, a separate cap 180 is shown with a hole 182 and straw 181 extended through upper wall 183. In this embodiment, the beverage can be consumed directly from the container like a sports bottle. The cap 180 essentially functions like a lid to prevent spills, and allows consumers to drink directly from the container via straw 181. Other drinking means (not shown), such as standard flip up drinking spouts, can also be used on cap 180. Cap 180 can also be made without a straw, wherein upper wall 183 can be made solid. Likewise, plug 176 discussed above, can be made to have a straw or drinking means extended through it, so that consumers can drink directly from the container.

Figure 7b also shows cap 180 with gasket 184 bonded directly thereto using a two shot or over-mold method. Cap 180 is formed first, and then gasket 184 is formed directly on cap 180 using a second mold. A stepped portion 185 is preferably formed around gasket 184, so that the width dimension of gasket 184 will not extend behind threads 187. This enables gasket 184 to be molded directly into cap 180 against surface 186, without threads 187 interfering with the insert mold. In other

embodiments, a sealing member, like those discussed previously, can also be molded directly into the cap, using a two shot or over-mold method. Moreover, to allow both the sealing member and gasket to be formed during the same production step, one or more channels can be extended between the sealing member and gasket, so that material from one can travel to the other during the production cycles.

In Figure 8a, an economical container 190 for holding ice around a bottle 191 is shown. Container 190 is preferably sized and shaped to enable a bottle 191 of a predetermined size and shape to be inserted therein. The wall 197 is preferably adapted such that with bottle 191 positioned in container 190, a space 196 is formed between container 190 and bottle 191 for storing ice particles therein. In this embodiment, however, the upper portion 192 of container 190 is preferably narrowed and provided with an opening 193 having an internal edge 194 having a predetermined size and shape, wherein edge 194 is adapted to be substantially pressed against and connected to a pre-formed reciprocal perimeter surface of bottle 191, i.e., just below the shoulder.

Figure 8a shows an embodiment where bottle 191 is specially made to have a horizontal rib portion 195 with a predetermined size and shape located thereon. Rib 195 is preferably adapted such that internal edge 194 can be inserted into rib 195, i.e., snapped in, to form a relatively tight fit, wherein the fit provides a substantially water-tight seal between container 190 and bottle 191, i.e., to seal space 196, and helps to maintain bottle 191 at a predetermined position relative to container 190.

Rib 195 on bottle 191 is preferably shaped with a central portion having a diameter that enables internal edge 194 of container 190 to fit tightly against it. A lower portion 198 of rib 195 is preferably curved and has a diameter only slightly greater than that of edge 194, to enable bottle 191 to slide down, while forming a "snap point" where edge 194 can be fitted into rib 195. An upper portion 199 of rib 195 preferably has a diameter greater than lower portion 198, so that upper portion 199 can prevent bottle 191 from sliding all the way down into container 190. Upper portion 199 preferably has a diameter greater than any other lower portion of bottle 191, such that bottle 191 can be inserted into container 190, while at the same time, bottle 191 can be held at a predetermined position inside container 190.

No bottom supports for bottle 191 are needed since the engagement of internal edge 194 with horizontal rib 195 preferably holds bottle 191 in position in container 190. This may allow, for instance, the beverage to be poured or consumed

directly from bottle 191, without having to remove it from the ice, and without water in the container leaking out. Also, enough of bottle 191 extends above edge 194 so that it can be held to prevent rotation of the bottle as the bottle's lid is being opened and/or closed. Container 190 can have a narrowed lower portion 200 for fitting into cup-holders, as discussed before. Upper portion 192 can be provided with one or more sealing members, blade rings or contact surfaces, etc. In such case, the sealing surfaces on the container are preferably adapted to engage a corresponding surface on the inner container, which can be a standard commercial beverage bottle. Where sealing members, such as blade rings, are used, the beverage bottle preferably has a relatively smooth exterior surface, or one or more horizontal ribs, wherein the engagement of the sealing member against the exterior surface of the bottle enables space 196 to be substantially sealed thereby.

Figure 8b shows an alternative securing means for container 190 with threads 205 formed on the perimeter of bottle 203, i.e., just below shoulder 206, which engage threads 204 on an upper portion 202 of container 190. Instead of an internal edge 194, this embodiment has internal threads 204 extended around the upper portion 202 thereof, which are adapted to be connected to threads 205 extended just below shoulder 206 on bottle 203. An upper edge 208 of container 190 is preferably adapted to be pressed and sealed against an abutment portion 207 on bottle 203, such that space 196 between bottle 203 and container 190 can be substantially sealed thereby. Upper edge 208 is preferably adapted with a slightly upwardly and outwardly extended flange that can be resiliently pressed against abutment portion 207, such that the tightening of bottle 203 into container 190 can progressively tighten the seal. Abutment portion 207 preferably has a diameter that is larger than the rest of bottle 203 below it, such that bottle 203 can be rotated into container 190 through opening 193, and be supported by the engagement of upper edge 208 and abutment portion 207. Bottle 203 can be held relatively securely with no need for supports.

The embodiment 210 shown in Figures 9a and 9b comprises a container 212, threaded cap 214, handle 216, and lower section 218, etc. In this embodiment, the lower support 220 is pushed up from floor 217 in a curved manner, wherein floor 217 is otherwise formed in a bowl-like shape. The support 220, in such case, can be similar to the one shown in Figure 10a, i.e., with five ridges 222 equally spaced apart and adapted to fit into five grooves on bottle 211. This way, when bottle 211 is

inserted into container 212 and held in substantial compression inside container 212 between cap 214 and support 220, bottle 211 can be prevented from rotating. In other embodiments, multiple supports like 292 discussed above can be provided which fit into each of the grooves on the bottom of bottle 211.

The bowl-shaped floor 217 is designed to displace ice particles, which can be added to container 212 before bottle 211 is inserted, wherein bottle 211 can then be shoved into the ice. Inserting bottle 211 into the ice will cause ice at the bottom of the container 212 to be displaced upward due to the bowl-like curvature of floor 217. Lower section 218 can be hollowed out underneath 219 and extended down to provide support for container 212. Floor 217 can be made relatively flat 230, as shown in Figure 10b, with a plurality of indentations 232.

Container 212 is preferably injection molded with a slight upward and outwardly angled pitch, as shown in Figure 9a. This further assists in causing the ice to be displaced upward when bottle 211 is shoved into the ice. This embodiment preferably has a widened neck to enable ice to be added after bottle 211 is positioned on support 220. Cap 214 can be designed with web-like members 215 to provide strength and rigidity if desired, and grips 213 can be provided. While this embodiment is preferably injection molded, container 212 can be blow-molded, with a relatively narrow neck, if desired.

A cap design is shown in Figures 11a and 11b. This cap 240 has sealing member 242 extended around opening 246, and a sealing gasket 244 within groove 248. Engaging surface 243 is designed to be pressed directly against the shoulder of a bottle represented by dashed line 256 in Figure 11b. Projection 252 is designed to brace and hold sealing member 242, although this is not necessary when sealing member is bonded or fused to cap 240. Projection 254 is designed to support sealing member 242, and provide a pinching effect when sealing member 242 is pressed against bottle 256. Projection 254 helps prevent bottles having higher and/or wider shoulder areas, as represented by dashed line 260, from being properly held inside if necessary. Line 258 shows how a bottle having a lower and/or narrower shoulder area can allow water to leak, since engaging surface 243 would not make contact with the bottle. These methods can be used by beverage companies and sellers that are interested in making coolers for specific bottled beverage products, as a means of promoting those products, as discussed above.

It can be seen that different caps similar to cap 240 can be made to accommodate bottles of different sizes and shapes, even if the same container is used. Different caps can be made to accommodate different bottles using the same container. Different size and shape removable sealing members 242 and sealing gaskets 244 can also be used to accommodate different bottles.

Each cap and container is preferably made from a moldable plastic, such as polyethylene, HDPE, polypropylene, PET, PVC, polystyrene, polycarbonate, etc., although any conventional material, such as stainless steel, glass, ceramic, etc., can be used. The containers can be made of materials that conduct heat poorly, or with double wall construction, or they can be made of a relatively thick or rigid plastic. The thickness preferably provides rigidity and a sufficient level of insulating properties, although any thickness that provides the necessary support can be used. Some pieces can be injection molded, while some can be blow-molded.

Other steps preferably involved in making caps and containers include measuring and/or scanning the bottle to obtain precise shapes and dimensions. Three-dimensional digital scanning can be done on equipment designed for this purpose. This enables the cap and container, and any engaging portion, such as sealing members, edges, surfaces, and supports, to be adapted precisely to a particular bottle, so that the bottle can be held in the container in substantial compression and substantially leak-free.

The present invention also contemplates that bottles can be custom made to fit the container, i.e., with surfaces that engage the sealing member and supports, if desired. The bottles can be made in a predetermined size and shape, and the containers can be designed so that the bottle will fit properly in the containers. Textures, grips and/or indentations can also be provided for improved grip. The containers can have a handle, although a strap, or indented grips, can also be used. One or both pieces can be made of transparent or translucent material so that the contents can be seen from outside. When double walls are used both can be clear, or one can be clear and the other opaque or translucent. Indicator lines can be provided on those embodiments where the upper portion is narrowed to indicate how much ice should be used in the container before inserting the bottle.

When these embodiments are used for promotional or souvenir purposes, the names and logos of beverage companies and/or sellers of beverages can be printed and used. The present invention contemplates that they can be used to promote the

products and services of the beverage company and/or seller whose names and/or logos are printed on them. The present invention encompasses a method wherein one beverage company, including manufacturers, bottlers, suppliers, etc., or beverage seller, can use the bottle cooler to increase sales and market share of its bottled beverage products at the expense of its competitors. Because certain embodiments of the present bottle cooler discussed above can be made so that only one or a select type of bottle can fit properly, by promoting that bottle cooler, i.e., getting people to try it and like it, a beverage company can use the bottle cooler as a means of increasing sales of its bottled beverage products, i.e., those that fit in the cooler. Consumers will have to buy bottled beverage products that fit the bottle cooler if they want to use the bottle cooler to keep their beverages cold, because only those bottles will work properly with the bottle cooler. Buying any other bottled product made by any other company would make it so that the bottle cooler cannot be used.

As shown in Figures 12a, 12b, 12c and 12d, a alternative type cooler with container 2 is designed to hold a specific PET bottle 4, but instead of forming a space for ice, the wall 6 is extended out a predetermined distance to form a gap 7 to hold a removable cooling means 8, such as a plurality of sleeves or rings 9 filled with a refrigerant, as shown in Figure 12a, that can be positioned around bottle 4. The opening 10 is preferably wide enough to allow both bottle 4, as well as cooling means 8, to be inserted into container 2.

A lower surface 16 of container 2 is preferably shaped to allow a specific bottle 4 to fit inside, with contours 18 that are adapted to engage and/or mate with grooved contours on the bottom of bottle 4. The present invention contemplates forming surface 16 so that it engages and/or mates with grooves on bottle 4 to prevent bottle 4 from rotating. This way, once bottle 4 is inserted, and cap 12 is tightened over bottle 4, the engagement of the contoured surfaces will prevent bottle 4 from rotating, thereby allowing the bottle's lid to be twisted on and off without the bottle 4 spinning inside.

Cap 12 is similar to the other caps discussed above, with an opening 13 for extending the neck of bottle 4 through, and threads 15 or other securing means for securing cap 12 onto container 2. In this embodiment, however, no sealing member is needed around opening 13, and no gasket or other sealing means is needed to seal cap 12 onto container 2, since no water will be placed in gap 7.

Cap 12, nevertheless, is preferably sized and shaped to properly secure a particular bottle 4 having a predetermined size and shape into container 2. The inside surface of cap 12 that engages the shoulder of bottle 4 can be adapted to press against the shoulder to properly secure bottle 4 in place.

Likewise, when it is desirable to use this embodiment to promote specific beverage products, it can be designed so that other bottles having different sizes and/or shapes will not fit properly. For example, opening 13 on cap 12 can be made wide enough to fit bottle 4, but not other bottles having a wider neck or lid. Moreover, other bottles may be too tall, or too short, to fit properly, wherein cap 12 can be adapted to fit bottle 4, but with other bottles, cap 12 may not fit properly, or allow the bottle to move and shift around inside container 2. It is a goal of the invention to maintain bottle 4 in a substantially fixed position, but also to allow a beverage company or seller of beverages to use the cooler as a means of promoting a particular bottled beverage product, as discussed above.

Rings 9 are preferably removable, refreezable and can slide over and around bottle 4 to fit into gap 7 between bottle 4 and wall 6 prior to attaching cap 12. In one version, rings 9 are designed to be slightly wider than bottle 4, so that after the rings 9 are placed in the freezer, and bottle 4 is inserted into container 2, rings 9 can easily slide down onto bottle 4 and inserted into gap 7. Alternatively, rings 9 can be made so that they fit relatively snug around bottle 4, so that they can be placed around bottle 4 before being inserted into container 2, wherein they can be inserted into gap 7 together at the same time.

In one embodiment, multiple rigid rings 9, as shown in Figure 12b, filled with a refrigerant can be stacked on top of each other, as shown in Figure 12a. For example, rings 9 can be inserted into gap 7 between bottle 4 and wall 6, one at a time, until enough rings are provided to fill gap 7. Rings 9 are preferably designed so that a predetermined number of them can be stacked to fill gap 7, and small enough so that they don't take up much space in the freezer. At the same time, each one is preferably thick enough and formed with an interior diameter sufficient to substantially fill gap 7, to keep bottle 4 cold. Preferably, there are at least three rings 9 provided to fill the height of gap 7, although any number of rings 9 can be used.

In another embodiment, the ring 9 or rings can be made of a flexible or semi-rigid material or a combination of flexible and semi-rigid materials so that they can be laid relatively flat in the freezer, as shown in Figures 12c and 12d. For example, the

rings 9 can be laid flat and stored in the freezer, and then expanded into the appropriate shape to fit relatively snug around the exterior of bottle 4. The refrigerant can be encased in a flexible bag-like material, or it can be encased in two or more sections 11, as shown in Figures 12c and 12d, with predetermined flex points 14 in between, wherein the plastic material can be pinched and/or thinned to allow ring 9 to be flattened, and then expanded to fit over bottle 4. The flexible or semi-rigid plastic is preferably formed flat, but due to its flexibility, can be fitted around the bottle 4 like a tube. When flexible and/or semi-rigid materials are used, the ring 9 can be a single member that can be fitted around bottle 4, instead of multiple rings, since it won't take up too much space in the freezer. Other cooling means 8 that can fit around bottle 4 are also contemplated.

On the inside of container 2, there is preferably a stepped portion 19 onto which the ring or rings 9 or other cooling means 8 can rest, such as just above the surface 16 that engages the bottom of bottle 4. This way, the ring or rings 9 can be positioned above the location where the surface 16 engages bottle 4, so that the ring or rings 9 don't interfere with the bottle's supporting means.

Container 2 can have a handle extending from the side or a handle can extend from cap 12, etc. The lower end of container 2 can be narrowed below bottle 4 to fit a standard cup-holder, if desired, or stepped portion 19 can be provided further up above, so that a portion of the lower end of container 2 can be narrow enough to fit standard cup-holders.

The container 2, cap 12, rings 9 or other cooling means 8 can be made of any conventional material, such as plastic or plastic-like material, using any standard molding method, such as injection molding. The container 2 can be made using double wall construction, if desired. Refrigerant for rings 9 can be any conventional material, such as a refreezable gel. Flexible and/or semi-rigid plastic materials can be used. The cooler can be made in any size, to fit virtually any type of bottle.

The present invention also contemplates a bottle cooler made of a flexible insulating material or fabric with one or more zippers or foam sleeve material. In this embodiment, the cooler is preferably designed to fit around the exterior of bottle 4, with an opening at the top to allow the bottle's neck to extend through. A zipper can be provided along an upper narrowed section, such that when it is unzipped, it enables the bottle to be inserted into the cooler, and when zipped, it enables the upper section to be snugly fitted over the shoulder of the bottle. This way, the bottle

can be securely held inside the cooler, and the beverage can be consumed or poured from the bottle without taking the bottle out of the cooler, and without the bottle sliding out. A material having a high friction coefficient, such as rubber, can be coated on the inside of the material surrounding the bottle, so that by grabbing the outside of the material, the bottle can be prevented from rotating inside.

In one such embodiment, cooling means similar to those discussed above, such as ring 9 that extends around bottle 4, can be used. In such case, the wall of the flexible cooler is preferably formed to provide a space to allow rings 9 to be fitted in between the bottle and wall. Rings 9 can be inserted after bottle 4 is placed in the cooler, or, they can be fitted around bottle 4 before the bottle is placed in the cooler. The cooler can be made using insulating materials, including multiple layers, to maintain the temperature of the rings 9 and bottle 4.

In another embodiment, a pouch or pouches can be used to enable refreezable packs to be inserted therein. For example, the pouch can have a series of pockets formed therein into which a series of refrigerant packs formed in the shape of straight or semi-cylindrical vertical slats can be inserted. Each pocket can be sized to fit a single refrigerant pack, for example. One or more zippers can be used to seal the pouch, with multiple pockets inside, or each pocket can have its own zipper. The inside layer of the pouch is preferably thin and provides good heat conducting properties, while the outside layer is insulated to prevent heat from penetrating into the pouch. The flexible cooler can be made of a flexible fabric, plastic or fabric with plastic liner, etc., as is known in the art. A strap can be provided to allow the flexible cooler to be easily carried.